Manitoba Agriculture

formation Update

Guidelines For Estimating

Weaner Pig (Nursery) Costs 5 - 23 kg

Based on marketing 32592 pigs

DATE: September, 2000

This publication is intended to provide a format and a set of guidelines for determining costs of production for a weaner pig 5 - 23 kg operation. This type of operation is intended to represent the second stage, or nursery, of a three stage pork production system. The three production stages are as follows: first stage-farrow to 5 kg, second stage-weaner pig (nursery) 5 to 23 kg, third stage-grower/finisher 23kg to market weight. The costs are estimates of production costs and not figures obtained from an actual survey of the hog industry in Manitoba. Adjustments will be necessary when applying these figures to your own enterprise. The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the management practices, and facilities seen in modern, well-managed swine operations of comparable size in Manitoba. Productivity and performance assumptions are based on information collected by department specialists, feed companies and other organizations. Adjustments will be necessary where individual productivity and performance levels differ from those listed.

Accurate, up-to-date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

Weaner Pig (Nursery) Costs 5-23 kg Cost of Production

The following farrow wean cost of production budget is based on the assumption that all feed is purchased.

The budget also includes a land investment cost based on the assumption that 160 acres would be required for this size of operation, with 140 acres being rented out at $25 per acre.

If developing a cost of production budget to include home mixed rations the following items should be added to the budget:

- additional equipment costs associated with a mix mill;
- additional bins for different ingredients;
- additional labour for feed preparation.

The rations illustrated in this budget are examples only.
Individual farm conditions should be taken into account when formulating the diets.
Producers need to know what the intakes of their animals are.
Please consult with a nutritionist for diet formulation suggestions.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a swine nursery 5-23 kg operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

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Weaner Pig (Nursery) Costs 5-23 kg Cost of Production Summary

Pigs sold 32,592

	$/Pig Sold	Total Cost	Your Cost
Operating Costs			
1. Feed Costs:			
1.01 Pre Starter 1	1.00	32,592	
1.02 Pre Starter 2	2.13	69,421	
1.03 Starter 1	4.20	136,886	
1.04 Starter 2	8.63	281,269	
Total Feed Cost	**$15.96**	**$520,168**	
2. Other Operating Costs:			
2.01 Weanling cost	41.25	1,344,420	
2.02 Veterinary Medicine & Supplies	0.43	14,100	
2.03 Maintenance & Repairs	0.14	4,563	
2.04 Hydro & Propane	0.61	20,000	
2.05 Insurance	0.12	3,911	
2.06 Manure Costs	0.37	12,122	
2.07 Office Supplies	0.04	1,440	
2.08 Levy, Marketing & Transportation	1.00	32,592	
2.09 Property Taxes	0.18	6,000	
Subtotal Operating Costs	60.12	1,959,316	
2.10 Interest on Operating Cost	0.61	19,881	
Total Operating Costs	**$60.73**	**$1,979,197**	
Fixed Costs			
3. Depreciation:			
3.01 Buildings and Manure Storage	0.68	22,163	
3.02 Equipment	1.08	35,199	
Total Depreciation Cost	$1.76	$57,362	
4. Investment:			
4.01 Land Cost	0.02	652	
4.02 Buildings and Manure Storage	0.40	13,037	
4.03 Equipment	0.33	10,755	
Total Investment Cost	$0.75	$24,444	
Total Fixed Costs	**$2.51**	**$81,806**	
5. Labour & Management			
Wages, benefits and hired manager	$1.53	$49,866	
Total Cost of Production	**$64.77**	**$2,110,869**	

Weaner Pig (Nursery) Production Costs 5-23 kg

1. This input table outlines the cost of production for the weaner barn only.
2. Buildings and equipment are valued at new cost.
3. Manure haulage is contracted out.

Herd Profile

Weaner Pig Places	**4,800**		
Number of turns	**7**		
Weaner Pigs Purchased	**33,600**		
Percent Post-Weaning Mortality	**3.0**		
Pigs Died, Post-Weaning	**1,008**		
Weaner Pigs Sold	**32,592**		
Previous 5 weeks Average Market Price	**$75.00** /cwt	$165.35	/ckg
Weanling Formula Factor (% of Mkt Price)	**0.55**		
Calculated Weanling Puchase Price	$41.25 /pig		

Feed Requirements

			Ration Cost	
			Purchased	**Home-Mixed**
Pre Starter 1	**1.0**	kg/pig	**$1,000.00**	$0.00 /tonne
Pre Starter 2	**2.5**	kg/pig	**$850.00**	$0.00 /tonne
Starter 1	**7.0**	kg/pig	**$600.00**	$0.00 /tonne
Starter 2	**23.0**	kg/pig	**$375.00**	$0.00 /tonne
Total Feed	**33.5**	kg/pig		

Weaner Pig Efficiency

Days Weaner on feed (nursery)	**42**	days
Total Cycle Days (per turn)	**52**	days
Target Starting Weight	**5.0**	kg
Target Ending Weight	**23.0**	kg
Feed Conversion Ratio (feed:gain)	**1.86**	kg
Average Daily Gain	**0.43**	kg

Labour

Total Hours per 7-day week	**80.0**	hours/week
Wage (includes benefits & hired manager)	**$12.00**	/hour

Capital Investment

		$/Sq. Ft.	$/Pig Place	Total
Buildings				
Barn	9,600 sq ft	**$43.75**	$87.50	$420,000
Office & loading				**$5,000**
Feed Mill (building only)				**$0**
Total Building Cost				**$425,000**
Equipment				
Nursery barn				**$285,000**
Generator				**$12,000**
Electrical & other				**$90,000**
Fire Alarm System				**$1,000**
Feed Bins				**$4,000**
Ingredient Bins				**$0**
Total Equipment Cost				**$392,000**
Total Buildings and Equipment Cost				**$817,000**
Land Value				
Land Investment	**160** acres @	**$500**		**$80,000**
Less: Rental Income	**140** acres @	**$25**		
Other Costs				
Site preparation				**$30,000**
Manure Storage				**$28,000**
Total Other Costs				**$58,000**
Total Capital Investment				**$955,000**

Feed Ingredient Costs

Ingredients	Price/tonne	Your Cost
Barley	$108.00	
Hulless Barley	$0.00	
Wheat-HRS	$121.00	
Wheat-CPS	$121.00	
Corn	$120.00	
Field Peas	$0.00	
Soybean Meal - 47 %	$315.00	
Canola Meal - 37%	$183.00	
Supplemental Protein (Base Mix)	$0.00	
Creep Premix	$1,400.00	
Sow Micro Premix	$0.00	
Crower Micro Premix	$0.00	
Canola Oil	$920.00	
Whey Powder	$720.00	
Herring Meal	$1,400.00	
Plasma	$4,450.00	
Limestone	$0.00	
Phosphorous (16-21)	$0.00	
Salt - 96%	$0.00	
L-Lysine HCL	$2,550.00	
L-Threonine	$0.00	
D,L-Methionine	$0.00	
Oats - Steam rolled	$400.00	
Other Ingredients	—	
Other Ingredients	—	
Other Ingredients	—	
Processing Cost		
(Hydro & Repairs/Maintenance & Insurance)	$3.25 /tonne	
Percent Weight loss due to processing	1.25 %	
Labour	$4.00 /tonne	

Feed Requirement and Cost Summary

	Amount (kg)	Price $ /tonne	Ration Cost $ /tonne	Your Cost
Pre starter 1:				
Corn	108.4	$120.00	$13.01	
Soybean Meal - 47 %	120.2	$315.00	$37.86	
Creep/Starter Premix	29.5	$1,400.00	$41.30	
Canola Oil	27.2	$920.00	$25.02	
Whey Powder	120.2	$720.00	$86.54	
Herring Meal	61.3	$1,400.00	$85.82	
L-Lysine HCL				
Plasma Protein	59.0	$4,450.00	$262.55	
Oats - Steam rolled	474.2	$400.00	$189.68	
Total Pre Starter 1	**1,000.0 kg**		**$741.78**	
Adjusted for weight loss (percentage)		1.25 %	$751.05	
Plus processing cost per tonne		$3.25	$754.30	
Plus Labour Cost		$4.00	**$758.30**	
Pre starter 2				
Corn	133.9	$120.00	$16.07	
Soybean Meal - 47 %	129.3	$315.00	$40.73	
Creep/Starter Premix	34.0	$1,400.00	$47.60	
Canola Oil	18.2	$920.00	$16.74	
Whey Powder	124.8	$720.00	$89.86	
Herring Meal	74.7	$1,400.00	$104.58	
L-Lysine HCL _	0.5	$2,550.00	$1.28	
Plasma Protein				
Oats - Steam rolled	484.6	$400.00	$193.84	
Total Pre Starter 2	**1,000.0 kg**		**$510.70**	
Adjusted for weight loss (percentage)		1.25 %	$517.08	
Plus processing cost per tonne		$3.25	$520.33	
Plus Labour Cost		$4.00	**$524.33**	
Starter 1				
Corn	607.5	$120.00	$72.90	
Soybean Meal - 47 %	204.2	$315.00	$64.32	
Creep/Starter Premix	39.9	$1,400.00	$55.86	
Canola Oil	11.3	$920.00	$10.40	
Whey Powder	90.7	$720.00	$65.30	
Herring Meal	45.4	$1,400.00	$63.56	
L-Lysine HCL _	1.0	$2,550.00	$2.55	
Plasma Protein				
Oats - Steam rolled				
Total Starter 1	**1,000.0 kg**		**$334.89**	
Adjusted for weight loss (percentage)		1.25 %	$339.08	
Plus processing cost per tonne		$3.25	$342.33	
Plus Labour Cost		$4.00	**$346.33**	

Starter 2

Corn	545.8	$120.00	$65.50	
Barley	186.0	$108.00	$20.09	
Soybean Meal - 47 %	226.9	$315.00	$71.47	
Creep/Starter Premix	39.9	$1,400.00	$55.86	
Canola Oil				
Whey Powder				
Herring Meal				
L-Lysine HCL _	1.4	$2,550.00	$3.57	
Plasma Protein				
Oats - Steam rolled				
Total Starter 2	**1,000.0 kg**		**$216.49**	
Adjusted for weight loss (percentage)		1.25 %	$219.20	
Plus processing cost per tonne		$3.25	$222.45	
Plus Labour Cost		$4.00	**$226.45**	

Weaner Pig (Nursery) 5-23kg Production Costs Worksheet

A. Operating Costs

1. Feed Requirements and Costs

			Your Cost
1.01 Pre starter 1			
	1.0	kg ration/pig	
x	$1,000.00	/tonne	
÷	1,000	kg/tonne	
=	**$1.00**	**/pig sold**	
1.02 Pre starter 2			
	2.5	kg ration/pig	
x	$850.00	/tonne	
÷	1,000	kg/tonne	
=	**$2.13**	**/pig sold**	
1.03 Starter 1			
	7.0	kg ration/pig	
x	$600.00	/tonne	
÷	1,000	kg/tonne	
=	**$4.20**	**/pig sold**	
1.04 Starter 2			
	23.0	kg ration/pig	
x	$375.00	/tonne	
÷	1,000	kg/tonne	
=	**$8.63**	**/pig sold**	

2. Other Operating Costs

2.01 Weanling Purchase			
	$75.00	$/cwt average market price	
x	0.55	% of mkt price weanling formula factor	
	$41.25	**purchase cost**	
2.02 Veterinary Medicine & Supplies			
	$3,600	professional services	
+	$10,500	medication	
÷	32,592	pigs sold	
=	**$0.43**	**/pig sold**	

2.03 Maintenance & Repairs

	$817,000	building & equipment cost
x	0.55	% year repair & maintenance
÷	32,592	pigs sold
=	**$0.14**	**/pig sold**

2.04 Hydro & Propane

	$10,000	hydro
+	$10,000	propane
÷	32,592	pigs sold
=	**$0.61**	**/pig sold**

2.05 Insurance

	$817,000	investment
x	$0.46	/$100
÷	100	/$100 capital
÷	32,592	pigs sold
=	**$0.12**	**/pig sold**

2.06 Manure Costs

Haulage	2.2	litres/pig/day
x	365	days
x	$0.002	/litre
x	4,800	pig places
÷	32,592	pigs sold
=	$0.24	/pig sold

Odour control

	$4,300.00	total cost
÷	32,592	pigs sold
=	$0.13	/pig sold

Total	**=**	**$0.37**	**/pig sold**

2.07 Office Supplies

	$0.30	/pig place
	$4,800.00	pig places
÷	32,592	pigs sold
=	$0.04	**/pig sold**

2.08 Levy, Marketing & Transportation

$1.00	**/pig sold**

2.09 Property Taxes

	$6,000	total taxes	_____
+	32,592	pigs sold	_____
=	**$0.18**	**/pig sold**	_____

2.10 Interest on Operating Cost:

	$41.25	weaner cost	
+	$18.87	subtotal operating	_____
÷	2	average	_____
x	52	days per turn	_____
÷	365	days per year	_____
x	8.50	% operating interest	_____
=	**$0.61**	**/pig sold**	_____

B. Fixed Costs

3. Depreciation: $\frac{\text{Original cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

	$483,000	building cost (including manure storage)	
-	$42,500	salvage value (building only)	
÷	20	years useful life	
÷	32,592	pigs sold	
=	**$0.68**	**/pig sold**	

3.02 Equipment

	$392,000	equipment cost	
-	$39,200	salvage value	
÷	10	years useful life	
÷	32,592	pigs sold	
=	**$1.08**	**/pig sold**	

4. Investment: $\frac{\text{Original Cost + Salvage Value}}{2}$ **x Investment Rate**

4.01 Land

	$80,000	land value	
x	5.00	% investment rate	
=	$4,000	investment cost	
-	$3,500	rental income	
÷	32,592	pigs sold	
=	**$0.02**	**/pig sold**	

4.02 Buildings

	$483,000	building cost (including manure storage)	
+	$42,500	salvage value (building only)	
÷	2	average	
x	5.00	% investment rate	
÷	32,592	pigs sold	
=	**$0.40**	**/pig sold**	

4.03 Equipment

	$392,000	equipment cost	
+	$39,200	salvage value	
÷	2	average	
x	5.00	% investment rate	
÷	32,592	pigs sold	
=	**$0.33**	**/pig sold**	

5. Labour

	80.0	hours/week	
x	52	weeks/year	
x	$12.00	/hour	
÷	32,592	pigs sold	
=	**$1.53**	**/pig sold**	

Summary of Home Mixed Feed Ingredients Used

Total pigs sold 32,592

	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig (kgs)	Total per Pig (lbs)
Barley	0.0	0.00	0.0	0.0
Corn	0.0	0.00	0.0	0.0
Field Peas	0.0	0.00	0.0	0.0
Soybean Meal - 47 %	0.0	0.00	0.0	0.0
Creep Premix	0.0	0.00	0.0	0.0
Canola Oil	0.0	0.00	0.0	0.0
Whey Powder	0.0	0.00	0.0	0.0
Herring Meal	0.0	0.00	0.0	0.0
Plasma	0.0	0.00	0.0	0.0
L-Lysine HCL	0.0	0.00	0.0	0.0
Oats - Steam rolled	0.0	0.00	0.0	0.0
	0.0	0.00	0.0	0.0

Summary of Purchased Feed Ingredients Used

Total pigs sold 32,592

	Total per Pig Mkt (kgs)	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig Mkt (lbs)
Pre starter 1	1.0	33.6	2.8	2.3
Pre starter 2	2.6	84.0	7.0	5.7
Starter 1	7.2	235.2	19.6	15.9
Starter 2	23.7	772.8	64.4	52.3
Total	**34.5**	**1,125.6**	**93.8**	**76.1**

For further information contact your local Manitoba Agriculture and Food office.

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